XXXVIII.—*Synonymic Notes on* Musca marginalis, *Wied., and the Genus* Pycnosoma, *Br. & von Berg.* By Ernest E. Austen.

Like many another much-collected species, *Musca marginalis*, Wied., one of the commonest and most striking of African Muscids, has had the misfortune to be much and variously described. In 1894, however, Brauer and von Bergenstamm fixed its systematic position by making it the type of their new genus *Pycnosoma*, the synonymy of which is as follows:—

Pycnosoma, Br. & von Berg.

Pycnosoma, Brauer and von Bergenstamm, Denkschr. math.-naturwiss. Cl. k. Akad. Wiss. Bd. lxi. (1894) p. 623.
Cosmina, Robineau-Desvoidy, Essai sur les Myodaires (1830), p. 423.
Chrysomya, Robineau-Desvoidy, *ibid.* p. 444 (*pro parte*).
Somomyia, Rondani, Mem. dell. Accad. dell. Scienze dell' Istituto di Bologna, t. xii. (1861) p. 44, note.
Paracompsomyia, Hough, Proc. Acad. Nat. Sci. Philadelphia, 1898, p. 184.

Brauer and von Bergenstamm (*loc. cit.*) defined the genus *Pycnosoma* as—"Callophorinæ, which have sternopleural bristles 1, 1; which exhibit a row of (often fine) hypopleural bristles, and in which the bristles of the dorsum of the thorax are frequently not developed. Female with orbital bristles, but these often small. In the male the upper facets of the eyes are frequently enlarged. Type *marginalis*, Wied.: Africa." Subsequently (Sitzgsber. k. Akad. Wiss. math.-naturw. Cl., cviii. Bd., Abth. i. (1899) pp. 496–497), Brauer gave the following further characteristics of *Pycnosoma*:—"Face hairy; body blue or green, metallic; facial angles moderately high above the oral margin, clypeus less prominent [than in *Tholychæta*, Br. & von Berg.], facial keel small or absent. Third longitudinal vein bare or sometimes hairy (Eastern hemisphere, India &c., Africa)."

Cosmina, Rob.-Desv., must be cancelled as insufficiently characterized. Of the three species described (*loc. cit.*) by Robineau-Desvoidy, one is mentioned below as possibly identical with *Pycnosoma marginale* (*Musca marginalis*), Wied., while the other two are probably also synonyms of one or other of Wiedemann's species described under *Musca* and now assigned to *Pycnosoma*.

Chrysomya, Rob.-Desv., is a hybrid genus and is also insufficiently characterized.

Somomyia, Rond., appears never to have been described. The reference given above is apparently that alluded to by Rondani himself, Dipt. Ital. Prodr. vol. iv. (1861) p. 9; but on turning to the work in question we find that the genus *Somomyia* is merely alluded to in an extract from a letter from Rondani to Prof. Giuseppe Bertolini, which is quoted by the latter in a note to a paper on the Diptera of Mozambique: there is nothing whatever in the shape of a description.

The following is the synonymy of *Pycnosoma marginale*, Wied.:—

Pycnosoma marginale, Wied.

Musca marginalis, Wiedemann. Auss. Zw. Ins. (1830) p. 395.
? *Cosmina arabica*, Robineau-Desvoidy, Essai sur les Myodaires (1830), p. 424.
Chrysomya regalis, Robineau-Desvoidy, *ibid.* p. 449.
Somomyia marginalis, Bertolini, Mem. dell. Accad. dell. Scienze dell' Istituto di Bologna, t. xii. (1861) p. 44.
Paracompsomyia nigripennis, Hough, Proc. Acad. Nat. Sci. Philadelphia, 1898, pp. 184–186: figs. of details in text.
Pycnosoma marginale, Austen, Journal of the Royal Army Medical Corps, June 1904, pp. 13–14, pl. ii. fig. 4.
Paracompsomyia nigripennis, Adams, Kansas University Science Bulletin, vol. iii. no. 6 (Oct. 1905), p. 201.

Pycnosoma marginale is very widely distributed in Africa, and even ranges eastward as far as Quetta; westward the writer has met with it in St. Vincent, Cape Verde Islands. The British Museum collection includes specimens from the following localities:—Sierra Leone; Congo Free State; Cape Colony; Natal; Transvaal; N.E. Rhodesia; Uganda; Abyssinia; Sokotra; Muscat, Arabia; and Quetta. Dr. A. Donaldson Smith took it in Somaliland on Aug. 23, 1894 *, and Colonel Yerbury found it at Aden.

As pointed out by Bezzi (Bull. Soc. Ent. Ital. xxxiii. (1901) p. 23), *Musca chloropyga*, Wied., and *Somomyia cuprinitens*, Rond., also belong to *Pycnosoma*. *P. cuprinitens* was described from Keren, Abyssinia. The synonymy of *Pycnosoma chloropyga*, Wied., is as follows:—

Pycnosoma chloropyga, Wied.

Musca chloropyga, Wiedemann, Auss. Zw. Ins. ii. (1830) p. 400.

* Hough, *loc. cit.* p. 184.

? *Chrysomya buccalis*, Robineau-Desvoidy, Essai sur les Myodaires (1830), p. 448.

Pycnosoma chloropyga, Austen, Journal of the Royal Army Medical Corps, June 1904, p. 14, pl. ii. fig. 5.

Paracompsomyia Hooghi, Adams, Kansas University Science Bulletin, vol. iii. no. 6 (Oct. 1905), p. 201.

This species, the type of which was from the Cape of Good Hope, seems to be essentially a South-African form, but, in addition to a series of examples from Cape Colony, the British Museum possesses two specimens from the East Africa Protectorate (*C. S. Betton*). The types of Adams's description are stated to be from Rhodesia.

Other African species in the British Museum collection belonging to the genus *Pycnosoma* are *Musca megacephala*, Fabr. (Ent. Syst. iv. p. 317), *Musca putoria*, Wied. (Auss. Zw. Ins. ii. p. 403), and *Musca elara*, Walk. (List Dipt. Ins. in Coll. Brit. Mus. iv. (1849) p. 870). Of *Pycnosoma putorium*, Wied., we have a series of specimens from Sierra Leone (Aug. 1899, *E. E. Austen*; and Aug. 1904, *Major F. Smith, R.A.M.C.*); Lagos (*Dr. H. Strachan*); Old Calabar, Nigeria, May 1900 (*Dr. H. E. Annett*); and Lutete, Congo Free State, Nov. 12, 1903 (*Drs. Dutton, Todd, and Christy*). Of *P. elara*, Walk., we have specimens from the "Interior of S. Africa" (*Lord Derby*); "S. Africa" (*Dr. A. Smith*); Leopoldville, Congo Free State, Dec. 10, 1903 (*Drs. Dutton, Todd, and Christy*); and Kafu River, near Mruli, Uganda, Sept. 1903 (*T. Grant*).

Lucilia fasciata, Macq. (Dipt. Exot. ii. 3, p. 144, 1843), from the Cape of Good Hope, and *Dexia hypsa*, Walk. (List Dipt. Ins. in Coll. Brit. Mus. iv. (1849) p. 866), locality unknown, also belong to the genus *Pycnosoma*, as doubtless do other species described by Wiedemann and Macquart under *Musca* and *Lucilia* respectively. In addition to the species mentioned above, Adams (*loc. cit.* p. 202) also describes from Rhodesia *Paracompsomyia splindida* (*sic*) and *P. verticalis*; in all probability these will prove to be identical with species of *Pycnosoma* previously described by Wiedemann or Macquart under the genera mentioned.

The Oriental species of *Pycnosoma* in the British Museum collection have yet to be studied; but *Lucilia flaviceps*, Macq. (Dipt. Exot. ii. 3, p. 145), of which we possess three specimens from India, must be transferred to this genus, as also *Musca remuria*, Walk. (*op. cit.* iv. p. 871), from China; of the latter species the Museum has recently received two specimens from Tinghai, Hong Kong, "sea-level," June 30, 1899 (*C. Ford*).

The habits of the species of *Pycnosoma* are similar to those of the well-known "green-bottle flies" (*Lucilia*), and there can be little doubt that *P. marginale* and *P. chloropyga*, in addition to *Musca domestica*, L., were partly responsible for the spread of enteric fever among the British Army during the late war in South Africa *.

British Museum (Natural History),
Cromwell Road, S.W.
Jan. 30, 1906.

XXXIX.—*On the Freshwater Medusa* Limnocnida tanganicæ *and its Occurrence in the River Niger.*

By Edward T. Browne, Zoological Research Laboratory, University College, London.

In the collection brought back by the late J. S. Budgett from the delta of the Niger in 1903 there were five specimens of a Medusa taken in a freshwater lagoon near Assay, on the Forcados River, one of the western branches of the Niger, and about 102 geographical miles from the sea. The occurrence of a Medusa in the Niger was, however, first noticed by Dr. Tautain in 1888. He caught specimens near Bamakou, in the French Soudan, but failed to preserve them. As he was unable to carry out his intention of obtaining a fresh supply, a description of the Medusa was never published, but only the fact of its occurrence (1).

The Medusa found by Budgett is, I am sure, *Limnocnida tanganicæ*, Böhm. It has, however, many more tentacles and sense-organs than are mentioned by Günther (2) in the original description of the species, and it comes nearer to the description given by Gravier (3) of the specimens found in the Victoria Nyanza.

The presence of *Limnocnida tanganicæ* in the Niger is, I think, more interesting than the discovery of a new freshwater species, as the Medusa is found in a river far away from the Great African Lakes.

The occurrence of freshwater Medusæ in a river which has direct communication with the sea naturally suggests the idea that the Medusæ have gradually migrated up the river and

* See E. E. Austen, "The House-Fly and certain Allied Species as Disseminators of Enteric Fever among Troops in the Field," Journal of the Royal Army Medical Corps, June 1904, pp. 1–16, pls. i. & ii.